

REMARKS

Claims 1-11 are pending in the present application. Claim 1 is herein amended. No new matter has been presented.

Rejections under 35 USC §112, First Paragraph

Claims 1-11 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The Examiner alleged as follows:

Claims 1 and 7 require controlling the air pressure “higher than atmospheric pressure,” which is not supported by the specification. The specification provides support for controlling the pressure by increasing or decreasing the pressure, but the specification does not explicitly disclose that the pressure is higher than atmospheric pressure. It is recommended removing the requirement of the pressure to be greater than atmospheric pressure.

(Office Action, page 2, lines 14-19).

Claims 1 and 7 have been previously amended to delete “higher than an atmospheric pressure.” Thus, the rejection has been overcome.

Rejections under 35 USC §103(a)

Claims 1-4 and 6-11 were rejected under 35 U.S.C. 103(a) as being obvious over Swiggett et al. (U.S. Patent No. 4,693,778, herein “Swiggett”) in view of Berndt (U.S. Patent No. 6,582,519) and either one of Keyworth et al. (U.S. Patent No. 5,534,101 herein “Keyworth”) or Ikushima (U.S. Patent No. 6,527,142).

Claim 5 was rejected under 35 U.S.C. 103(a) as being obvious over Swiggett, Berndt, either one of Keyworth or Ikushima, and further in view of Hawkins (U.S. Patent No. 3,742,107), herein "Hawkins".

In the Advisory Action, the Examiner alleged as follows:

Applicant asserts Berndt is concerned with coating a UV curable polymer and there is no reason to combine an apparatus of coating a fiber with UV curable polymer with Swiggett. Swiggett teaches a coated optical fiber and Berndt provides details of the apparatus and method for providing a coating onto an optical fiber.

(Advisory Action, page 2). The Examiner's allegation is based on impermissible hindsight analysis.

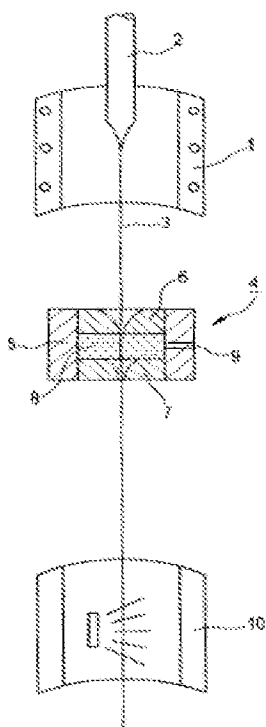
Even if Swiggett discloses a method and apparatus for applying conductor wiring to a substrate, the conductor wire is coated with a **coating which is no-tacky** and non-blocking in its coated state but activatable to be an adhesive at the time the conductor is applied to the surface and to return to non-tacky state after the conductor is fixed to the surface. Therefore, there is no reason why a person having ordinary skill in the art would change the coated conductor wire to an uncoated optical fiber.

Berndt discloses a technique for coating an optical fiber, but it does not disclose a technique for arranging the optical fiber on a substrate to form optical wiring. More specifically, Berndt discloses coating of the optical fiber with "acrylate-based resin" (column 2, lines 40-43). However, the disclosed coating is intended to form an acrylate-based resin film for the purpose of preventing cracks of the optical fiber, and it is not intended to apply an adhesive over the

optical fiber. Therefore, the disclosed technique of Brendt is not to arrange the optical fiber on a substrate to form an optical wiring.

Also, what Berndt discloses is an apparatus of coating an optical fiber with an “**UV curable polymer**” but not with an “adhesive material” as the Examiner alleged. Moreover, the UV curable polymer coating on the optical fiber is cured by an UV source. In Berndt, because the coating apparatus 4 works together with the UV source 10 in the later stage, there is no reason that the coating apparatus 4 is positioned there if it were not for the UV source 10 in the later stage. This will be clear from the description of Berndt:

FIG. 1



“Between coating apparatus 4 and UV source 10 a protective gas zone (not depicted) may be provided” (Berndt, column 2, lines 54-55 and Fig. 1 shown left).

Keyworth discloses a method and apparatus for forming a waveguide on a substrate which comprises feeding “a curable **light guide forming liquid**” (not necessarily “a UV curable liquid” as the Examiner alleged) from a nozzle onto a substrate, relatively moving the nozzle and the substrate and curing the UV curable liquid (column 4, lines 1-21). There is no reason why this formation of a waveguide from “a curable light guide forming liquid” is combined with Swiggett’s method and apparatus for applying conductor wiring to a

substrate.

Ikushima discloses a method of dispensing a constant amount of liquid from a nozzle. However, there is no reason why Ikushima's method of dispensing a constant amount of liquid from a nozzle is combined with Swiggett's method and apparatus for applying conductor wiring to a substrate.

Thus, the rejection has not established a prima facie case of obviousness. Also, the Examiner's allegation is nothing but a typical example of an impermissible hindsight analysis.

Moreover, in Swiggett, a pressure wheel 280 for bringing the conductor into pressure contact with the board surface. (see column 8 line 57- column 9 line 1)

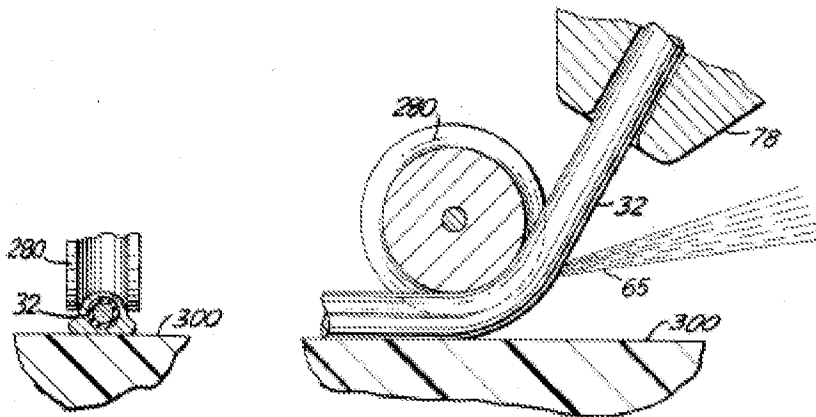


FIG. 18

FIG. 19

In the Advisory Action, the Examiner alleged as follows:

Applicant argues Swiggett uses a pressure wheel that wipes away the adhesive because the wiring head of Hirayama wipes away adhesive. This argument is not persuasive because Figure 18 of Swiggett shows the adhesive is still present around the optical fiber and it is not wiped away.

(Advisory Action, page 2).

However, the reason why the adhesive remains is that the adhesive used in Swiggett is activated only where the laser beam 65 is irradiated. Swiggett describes as follows:

Thus, as will be more fully described later herein, with mirror 62 in one position (FIG. 5), **the adhesive coating on the conductor is activated by laser beam 65** in order to apply and affix the conductor to the surface of the base and, with mirror 62 in the tilted position (FIG. 4), laser beam 65 is deflected into opening 150 to remove or strip the adhesive and insulator coatings from the conductor. Recessed opening 150 is provided with a vacuum opening to apply a vacuum and remove residue as the coatings are removed or stripped and an air opening to apply an air blast to the area to assist in the removal of residue from the stripped wire and the recess.

(Swiggett, column 5, line 67 to column 6, line 6). If adhesive is applied on the whole surface of the optical fiber like the present invention, the adhesive will be removed by the pressure wheel 280. Therefore, the Examiner's above allegation does not apply to the adhesive used in the present application.

For the reasons mentioned above, the present invention patentably distinguishes over Swiggett et al., Berndt, Keyworth et al. and Ikushima.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact the undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

Application No.: 10/572,377
Art Unit: 1791

Submission under 37 C.F.R. §1.114
Attorney Docket No.: 062284

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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